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T. BELL
12-11-02

CERTIFICATE OF MAILING
37 CFR 1.8(a)

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Date of Deposit: Nov 22, 2002 By: James E. Buckley

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF
Dick L. Knox, et al.

DOCKET NO. 104-22997

SERIAL NO.: 09/838,741

EXAMINER:
Dang, D. Le

FILED: 04/19/2001

TITLE: **Pressurized Bearing System for
Submersible Motor**

GROUP ART UNIT: 2834

DECLARATION UNDER 37 CFR 1.132

Hon. Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

I, MARK C. JAMES, state the following:

I am employed by Centrifluid, a division of Baker Hughes Incorporated, which is the assignee of the above-identified application.

I am currently manager of Pump Engineering for Centrifluid. I have been employed by Centrifluid since 1982 and have been involved throughout my employment in the mechanical design and development of centrifugal submersible well pumps and motors.

I received a degree in Mechanical Engineering from the University of Kansas in 1972. I was employed as an engineer in other fields from 1972 to 1982. I am a registered professional engineer in the State of Missouri.

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I have reviewed U.S. Patent No. 4,286,185 (Erickson). In my opinion, impeller 40 and diffuser 41 of Erickson would not be capable of achieving sufficient pressure to produce a continuous liquid film between shaft 11 and bearing 12 that prevents contact of shaft 11 with bearing 12.

Furthermore, it is my opinion that the maximum pressure achievable from a single stage within a motor for a submersible centrifugal well pump such as shown in Erickson would be less than 30 psi. I am basing my opinion on my knowledge that the largest motor housing for a submersible centrifugal well pump is about 7-1/4" in outer diameter. Assuming the typical wall thickness that is required of a motor of this type, the maximum outer diameter of a diffuser that could mount in such a motor would be about 5". Submersible well pump motors for centrifugal pumps typically run at a maximum of 3,500 rpm. My computations indicate that a single pump stage of this type would produce a maximum pressure of about 22 psi.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true,; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Sec. 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the publication or any patent issued thereon.


MARK C. JAMES

Date: 11/22/02

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